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(71)Applicant : TOYOTA CENTRAL RES & DEV LAB INC

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(72)Inventor : USUKI ARIMITSU
MIZUTANI TADASHI
FUJIMOTO SHIGERU
KURAUCHI NORIO
UEGAKI OSAMI

(54) COMPOSITE MATERIAL AND PRODUCTION THEREOF

(57)Abstract:

PURPOSE: To obtain a composite material having excellent mechanical strength, heat resistance, etc., by making an ion exchange between a specific laminar clay mineral and a specific onium salt, mixing the resulting clay mineral with a monomer for a thermosetting resin and/or its oligomer and polymerizing the mixture.

CONSTITUTION: A laminar clay mineral having a cation exchange capacity of 50W200 mill-equivalents/100g, a layer thickness of 7W12Å and a distance of at least 30Å between layers (e.g., montmorillonite) is prep'd. There is made an ion exchange between said clay mineral and at least one onium salt having a group at its terminal or on its side chain, and group acting as a polymn. initiator or a crosslinking agent or forming a terminal group by polymn. (e.g., ammonium 12-aminododecanate). The resulting clay mineral is mixed with a monomer for a thermosetting resin (e.g., a phenolic resin) and/or its oligomer. The monomer and/or the oligomer in the mixture are/is polymerized to obtain the desired composite material.

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